Curriculum Vitae: Scott Neal Keeney

Contact:
Molecular Biology Program
Howard Hughes Medical Institute
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Education

1983–1987	Virginia Polytechnic Institute and State University B.S. Biochemistry, Blacksburg, VA
1987–1993	University of California Ph.D. Biochemistry, Berkeley, CA Advisor: Prof. Stuart Linn

Postdoctoral Training

1993–1997	Department of Molecular and Cellular Biology Harvard University, Cambridge, MA Advisor: Prof. Nancy Kleckner

Positions and Appointments

Sept. 1997–present	Molecular Biology Program, Memorial Sloan Kettering Cancer Center. Assistant Member (1997–2004), Associate Member (2004–2006), Member (2006–present), Frederick R. Adler Chair (2017–present).
Jan. 1998–present	Molecular Biology Program and Biochemistry and Structural Biology Program, Weill Graduate School of Medical Sciences, Cornell University. Assistant Professor (1998–2005), Associate Professor (2005–2007), Professor (2007–present), Co-Director, BCMB Allied Graduate Programs (2007–2010).
Sept. 2006–present	Gerstner Sloan Kettering Graduate School of Biomedical Sciences. Associate Professor (9/2006–11/2006), Professor (11/2006–present).
Aug. 2008–present	Investigator, Howard Hughes Medical Institute

Honors and Awards

1983	Marshall Hahn Scholarship
1983-1987	National Merit Award Scholarship
1986	Phi Beta Kappa

1987	James Lewis Howe Undergraduate Research Award, Blue Ridge Section of the American Chemical Society
1987	B.S., *summa cum laude*, in honors, Virginia Tech
1987-1988	University of California Regents Fellowship
1988-1991	National Science Foundation Graduate Fellowship
1994-1997	Fellow, Damon Runyon-Walter Winchell Foundation
1998-2001	Awardee, NY City Council Speaker's Fund for Biomedical Research
2004	Louise and Allston Boyer Young Investigator Award, MSKCC
2005-2010	Leukemia and Lymphoma Society Scholar
2007	Finalist, Blavatnik Young Scientist Award, NY Academy of Sciences
2008	Investigator, Howard Hughes Medical Institute
2012	Clayton S. White Endowed Lecture, Oklahoma Medical Research Foundation
2013	Keynote Speaker, University of Iowa Genetics PhD Program Retreat
2014	Keynote Speaker, Abcam Recombination Meeting celebrating the 50th anniversary of the Holliday model
2014	Elected, Fellow of the American Academy of Microbiology
2017	Elected, Fellow of the American Academy of Arts and Sciences
2017-2019	Harvey Society Vice President (2017-18) and President (2018-19)
2017-present	Frederick R. Adler Chair, MSK
2020	Elected to the National Academy of Sciences, USA

Scientific Societies

National Academy of Sciences (elected member)
American Academy of Arts and Sciences (elected member)
American Academy of Microbiology (elected fellow)
Genetics Society of America
American Society for Microbiology
Harvey Society

Mentoring

PhD Students:

Completed dissertations in my laboratory (current position indicated) **(15 total)**:

- Kehkooi Kee (Associate Professor, Department of Basic Medical Sciences, Tsinghua University School of Medicine, Beijing)
- Charanjit Arora (Chief Intellectual Property Officer, UCLA Technology Development Group)
- Kiersten Henderson (Director of Data Science, ioCurrents)
- James Dowdle (Medical Affairs Training Lead, United Therapeutics Corporation)
- Mariko Sasaki (Assistant Prof and Lecturer, Tokyo University, Japan; Assistant Professor (tenure track), National Institute of Genetics, Mishima, Japan, from April 2023)
- Drew Thacker (Senior Scientist, Inscripta Inc.)
- Ryan Kniewel (Senior Research Scientist, NielsenIQ)
- Sam Globus (Vice President of Operations, Genomenon)
- Xuan Zhu (Senior Applied Scientist, Amazon Web Services)
- Isabel Lam (postdoc, Harvard Medical School)
- Sam Tischfield (postdoc, MSK)
- Mehmet Erman Karasu (postdoc, ETH Zurich)

Xiaojing Mu (postdoc, ETH Zurich)
Pei-Ching (Peggy) Huang (staff scientist, Metagenomi Inc.)
Jiaqi Xu (postdoc, Peking University)

Current (undergraduate institution indicated) **(1 total)**:
Zhi (Zack) Zheng (Southern University of Science and Technology, Shenzhen, China)

Past Visiting PhD students:
Monica Faeta (University of Rome Tor Vergata)
David Ontoso (Salamanca University)
Marina Marcet (University of Barcelona)
Rifat Najnin (Kyoto University)
Cristina Madrid (University of Barcelona)

Postdoctoral Fellows:
Past (current position indicated) **(26 total)**:
Shohreh Maleki PhD (Senior Lab Manager, Karolinska Instit., Stockholm, Sweden (retired))
Emmanuelle Martini PhD (Researcher (permanent position), CEA, France)
Monica DiGiacomo PhD (Research Manager, EMBL Rome)
Takashi Okada MD PhD (Asst. Prof., Dept of Urology, Ijinkai-Takeda General Hospital, Kyoto, Japan)
Matthew Neale PhD (Royal Society Fellow, Genome Stability Centre; Reader, Univ Sussex, UK)
Jing Pan PhD (Senior Lecturer, University of Texas, Dallas)
Ignasi Roig PhD (Associate Prof., Univ. Auton. Barcelona, Spain)
Viji Subramanian PhD (Assistant Professor, Dept. of Biology, Indian Institute of Science, IISER, Tirupati, Andhra Pradesh, India)
Esther de Boer PhD (position unknown)
Liisa Kauppi PhD (Group Leader at Systems Oncology Research Program, Helsinki Academic Medical Center)
Megan van Overbeek PhD (Senior Director of Cell Therapy Discovery, Metagenomi Inc.)
Monika Mehta PhD (R&D Scientist, Frederick National Laboratory, NCI)
Neeman Mohibullah PhD (Director, Integrated Genomics Operation, MSKCC)
Julian Lange PhD (Associate Director, DE&I Data and Program Management, Takeda)
Seoyoung Kim PhD (International Product Manager, Roche)
Eleni Mimitou PhD (Director, Molecular Profiling at Immunai)
George Chung PhD (Postdoc, NYU)
Michiel Boekhout PhD (Postdoc, UMC Utrecht, Netherlands)
Corentin Claeys Bouuaert PhD (Group Leader, Louvain Inst of Biomolecular Science and Technology, Belgium)
Shintaro Yamada PhD (Assistant Professor, Kyoto University)
Devanshi Jain PhD (Assistant Professor, Rutgers University)
Manoj Thakur (Indian Institute of Science, Bangalore)
Laurent Acquaviva PhD (CNRS permanent position, Cancer Research Center of Marseille, France)
Hajime Murakami PhD (Assistant Professor, Univ. of Aberdeen, Scotland)
Soonjoung Kim PhD (Research Professor, Yonsei University College of Medicine, Korea)
Éva Suranyi

Current (graduate institution and postdoctoral fellowship information indicated) **(11 total)**:

David Ontoso Picon PhD (Univ. of Salamanca, Spain)
Tao Li PhD (Univ. of Science and Technology of China, Hefei; Lalor Foundation Fellowship)
Marina Marcet-Ortega (Univ. Auton. Barcelona)
Meret Arter (ETH Zurich; EMBO Long-Term Fellowship; MSK BRIA grant)
Kaixian Liu (Johns Hopkins University; Damon Runyon Fellowship)
Min Lu (Life Sciences Institute, Zhejiang University, Hangzhou, China)
Thierry N'Tumba-Byn (Paris 11 Univ., Orsay)
Yuichiro Saito (Kyoto University, Japan)
Jian Chen (State Key Laboratory of Stem Cell and Reproductive Biology, Institute of Zoology, Chinese Academy of Sciences, Beijing, China)
Lvqing Zheng (Academy for Advanced Interdisciplinary Studies, Peking University)
Yan Wang (China Agricultural University, Beijing, China)

Undergraduates (16 total):

Often via the MSKCC Summer Undergraduate Research Program or HHMI EXROP
(Subsequent training and last known position indicated)

Marc Waase, Cornell University, 1999 (MD PhD, Cornell/Rockefeller; Residency: Internal Medicine, NY Presbyterian Hospital; Cardiology Fellow, NYPH; Assistant Prof. of Medicine, Columbia)
Steven Quatela, Haverford College, 1999 (MD PhD, NYU; Clinical Fellow in Pediatric Hematology/Oncology, MSK; currently in private practice)
Zareen Gauhar, Mount Holyoke College, Springfield MA, 2000 (PhD, Yale Med; Senior Vice President, Group Medical Director, Area 23 on Hudson)
Jennie Hann, Stanford University, 2002 (PhD in English, Johns Hopkins University, 2017; author and biographer)
Tara Berman, University of Pennsylvania, 2004, 2005 (MD Tel Aviv Univ; Medical Oncology Fellow, NCI; Medical Gynecologic Oncologist, Inova Fairfax Hospital, Virginia)
Alanna Li, Cornell University, 2007 (DDS 2014, Columbia Dental School; in private practice)
Meredith Spadaccia, University of Maryland, 2008 (Nurse Practitioner, Mt Sinai)
Adolfo Cuesta, Haverford College, 2009 (MD PhD, UCSF; Internal Medicine Resident, UCSF)
Leslie Higuita-Montoya, Furman University, 2011 (MPH, Mt Sinai; MD, NYU; private practice)
Danté Johnson, Louisiana State University, 2013 (PhD student, Pharmaceutical Sciences, University of Maryland, Baltimore)
Tomás Rodriguez, UC Davis, 2014 (MD PhD program, UMass Medical School)
Satoshi Senmatsu, Tokyo Metropolitan Univ., 2016 (PhD student, Tokyo Metropolitan)
Linda Ho, UCLA, 2017 (Master's in Public Policy, Georgia Tech; Health Specialist, NIH Office of Rare Disease Research)
Hisashi Kamido, Kyoto University, 2017 (medical resident, Japan)
Kaku Maekawa, Kyoto University, 2018 and 2019 (medical resident, Nara Prefecture, Japan)
Takaaki Yakushigawa, Kyoto University, 2019 (medical student, Kyoto Univ)

Institutional Service

MSK:

1998–2006 Molecular Biology Seminar Committee

2008–2013	MSKCC Committee on Appointments and Promotions
2008–2014	Sloan Kettering Institute Committee on Appointments and Promotions
2011	Chair, MSKCC Task Force on Genomics and Proteomics
2013–2016	Chair, Oversight Committee, Proteomics Core Facility
2014–2019	Executive Committee, Functional Genomics Initiative
2009–present	Postdoc/Faculty Forum, “Chalk Talk Tips”
2010–present	Oversight Committee, Integrated Genomics Operation
2017–present	Institutional Animal Care and Use Committee (IACUC); Chair, 2019–present
2017–present	Advisory Committee, Center of Comparative Medicine and Pathology
2018–2021	Leadership Committee, SKI Research Computing Cluster
2018–present	Advisory Committee, Mouse Genetics Core Facility
2020–present	Research Laboratory Safety Committee
2021–present	Advisory Committee, Research Animal Resource Center (RARC)
2021–2022	Advisory Committee, Molecular Cytology Core Facility
2021	Search Committee for Cell Biology Program Chair
2021	Search Committee for Proteomics Core Facility Director
2022	Advisory Committee, Cytogenetics Core Facility
2022	Search Committee for MSK President and CEO
2022–present	Organizing Committee, SKI Basic Sciences Retreat
2023–present	Sloan Kettering Institute Committee on Appointments and Promotions

Graduate Education:

2003–2007 BCMB first year advisor

2007–2010 Co-Director, Biochemistry and Cell & Molecular Biology (BCMB) Allied Programs

GSK First Year Mentor: Eric Alonso, Elizabeth Wasmuth, Yvonne Gruber, Chong Luo, Miguel Roman

Teaching:

2005–2008	Weill BCMB, Molecular Genetics Course Director
1998–2005	Weill BCMB, Gene Structure and Function (2 lectures per year)
1998, 2000, 2002	Weill BCMB, Nucleic Acids Enzymology (3–6 lectures per year)
2006	Weill BCMB Focus Group, “Meiosis”
1998–present	Weill BCMB, Molecular Genetics Course, 1–3 lectures per year
2006–present	GSK Core Course, 2-6 lectures per year

Committees:

1997–2007	Weill BCMB Retreat Committee
1999–2003, 2006	Weill BCMB ACE Committee
2004–2010	Weill BCMB Curriculum Committee
2007–2012	Weill BCMB Admissions Committee
2013	Search Committee, Weill Graduate School Dean
2014–2018	GSK Graduate Admissions Committee
2017	Co-Chair, intramural review committee, Weill Immunology and Microbial Pathogenesis Program
2020	Weill Graduate School Social Justice & Anti-Racism Taskforce
2020–present	GSK Committee on Diversity Initiatives and Student Affairs

Thesis and thesis-defense committees:

Weill/Cornell: (partial listing from **> 30 total**) Pearl Chang, Liwei Xu, Karen Lee, Jale Refik-Rogers, Ligeng Tian, Chonghui Chen, Chunling Gong, Rob Gillespie, Ryan Heller, Yun Jiang, Hilary Gerber, Claudio Alarcon, Kelly Yule George, Carrie Adelman, Jan Theunissen, Borko Amulic, Ram Madabhushi, Jennifer Lee, Jaclyn Gareau, Sohini Sanyal, Yu-Hung (Jeff) Chen, Cristina Ghenoiu, Ryo Hayama, Zhenjian Cai, Emily Bauer, Ying Liu, Min Hsu, Zhicheng (Ray) Qiu, Sujan Devbhandari, James Bellush, Erika Buechelmaier, Jaclyn Bonner, Gillian Lin, Helen Hoxie

GSK **(9 total)**: Muge Akpinar, Sadia Rahman, Elizabeth Wasmuth, Lei Wei, Weiran Feng, Rui Gao, George Vaisey, Ella Melnick, David Van Dongen

MD/PhD Program **(4 total)**: Tom Nguyen, Josh Silverman, Isaac Klein, Xiao Peng

External (**9 total**): Angelique Girard (Greg Hannon lab, Cold Spring Harbor); Tracy Callender (Nancy Hollingsworth lab, Stony Brook University); Huei-Mei Chen (Janet Leatherwood lab, Stony Brook University); Boubou Diagouraga (Bernard de Massy lab, IGH Montpellier, France); Jonna Heldrich (Andreas Hochwagen lab, NYU); Mina Kojima (David Page lab, Whitehead Institute and MIT); Zachary Baker (Molly Przeworski lab, Columbia Univ.); Andrew Ziesel (Nancy Hollingsworth lab, Stony Brook University); Emily Sible (City College of New York)

Extramural Service

Editorial and Review:

Genetics (Associate Editor 2007–2011)
Journal of Cell Biology (Editorial Board 2015–2021)
Genes to Cells (Associate Editor 2003–present)
Chromosoma (Associate Editor 2006–present)
PLoS Biology (Editorial Board, 2017–present)
Ad hoc reviewer (partial listing): *Annual Reviews in Genetics, Cell, Chromosoma, Current Biology, Developmental Cell, EMBO Journal, Genetics, Genes & Development, Genome Research, International Journal of Andrology, Journal of Biological Chemistry, Journal of Cell Biology, Journal of Cell Science, Molecular Cell, Molecular and Cellular Biology, Nature, Nature Genetics, Nature Structural and Molecular Biology, Nucleic Acids Research, Proceedings of the National Academy of Science USA, Science, PLoS Biology, PLoS Genetics, Trends in Genetics*

Conference Organization:

Meiosis Gordon Conference (vice-Chair 2006; Chair 2008)
FASEB Yeast Chromosomes Conference (co-Organizer 2012)
3R Meeting, Japan (Member of foreign advisory board 2012, 2014, 2016, 2020)
Wenner-Gren Foundation Symposium on Mammalian Meiosis, Organizing Committee, 2013
Mini-symposium co-organizer, 2016 ASCB Meeting, San Francisco
Keystone Symposium on Replication and Recombination (co-Organizer, 2017)
FASEB Conference on Genetic Recombination and Genome Rearrangements (vice-Chair 2017; Chair 2019)
Fifth Symposium on Frontiers in Reproductive Biology, Beijing (co-Organizer 2018)
MAYosis online seminar series (Organizing Committee, 2021)
NYC Genome Integrity Discussion Group (co-Organizer, 2014–2024)

Grant Reviews:

Genetic Mechanisms of Cancer Committee, American Cancer Society (6/2003–6/2007)
NIH Molecular Genetics A (MGA) study section (ad hoc 10/2007, regular member 10/2008–6/2012, ad hoc 10/2015)
NIH MRAA study section (inaugural chair, 6/2021–6/2023)
Ad hoc on NIH study sections (R15, P01, K99, etc): 6/2006 and 2/2008 (NDT); 3/2015; 6/2015; 2/2016; 3/2016; 9/2016; 3/2017; 12/2017; 6/2018; 2/2019; 11/2019
Other ad hoc reviewer (partial listing): European Research Council; Cancer Research UK (Review Panel Member, 9/2014); NSF; Israel Science Foundation; Marathon (Italy); Austrian Science Fund; Council for Chemical Sciences of the Netherlands Organisation for Scientific Research; Wellcome Trust (U.K.); Swiss National Science Foundation; New Jersey Commission on Cancer Research; Leukemia and Lymphoma Society.

Other:

NAGMS Council, Ad Hoc Consultant, 5/2013
Scientific Advisory Board, Basic Sciences Division, Fred Hutch Cancer Center (ad hoc 11/2017; standing member 2/2020 – present)
Scientific Advisory Board, Max Planck Institute of Biochemistry in Martinsried, Germany (4/2021 – 12/2026)

Invited Talks

Conferences (partial listing: 2018–present):

Univ Penn Genome Integrity Group Symposium (Philadelphia, 5/2018)
Stanford Chromosome Dynamics Meeting (Palo Alto CA, 5/2018)
Abcam Recombination Meeting (London UK, 5/2018)
British Meiosis Meeting (Sussex UK, 5/2018, keynote speaker)
Cambridge 3R Club (Gurdon Institute, Cambridge UK, 5/2018)
Meiosis Gordon Conference (New London, NH, 6/2018)
Fifth Symposium on Frontiers in Reproductive Biology (Beijing, 11/2018, co-Organizer)
3R+3C Meeting (Kanazawa Japan, 11/2018)
Chromosome Stability Meeting (Bangalore, India, 12/2018)
Joint SKI-Crick-IFOM Meeting (Sardinia, Italy,5/2019)
Chromosome Dynamics Gordon Conference (Discussion Leader; Sunday River, ME, 6/2019)
FASEB Recombination Meeting (Chair; Steamboat Springs CO, 7/2019)
EMBO Meiosis meeting (La Rochelle, France, 8/2019)
Symposium on Recombination (Hong Kong, 9/2019)
Origins of Yeast Research (CSHL, 10/2019)
Chromosome Dynamics Graduate Program Symposium (Vienna, 2/2020)
4D Genome Symposium (Heidelberg, Germany, 3/2020) (held remotely)
Meiosis in Quarantine online meeting (4/2020)
Abcam Recombination Meeting (Cambridge UK, 5/2020 (postponed))
Cold Spring Harbor Symposium (5/2020 (postponed))
Meiosis Gordon Conference (New London, NH, 6/2020 (postponed))
Spanish Meiosis Meeting (Salamanca, Spain, 7/2020 (postponed))
3R+3C Meeting (Member of foreign advisory board; Chiba Japan, 11/2020 (postponed))
Phase Separated Systems in the Nucleus (Pune, India; virtual, 4/2021)
Chromosome Dynamics Gordon Conference (Il Ciocco, Italy, 6/2021 (postponed))
FASEB Recombination Meeting (Steamboat Springs CO; 8/2021 (postponed))

European Society of Human Genetics meeting (virtual, 8/2021)
EMBO Meiosis Meeting (Austria, 9/2021 (postponed))
North American Testis Workshop (La Jolla CA, 5/2022)
Joint SKI-Crick-IFOM Meeting (Ashridge Estate, UK, 5/2022)
86th Cold Spring Harbor Symposium (6/2022)
Meiosis Gordon Conference (New London, NH, 6/2022)
FASEB Recombination Meeting (Steamboat Springs CO, 8/2022)
3R+3C Meeting (Chiba Japan, 11/2022 (postponed))
Fusion DNA Repair Meeting (Mexico, 5/2023)
EMBO Meiosis Meeting (Austria, 6/2023)
Fusion Recombination Meeting, keynote speaker (Portugal, 7/2023)

Future: Meiosis Gordon Conference (New London, NH, 6/2024); FASEB Recombination Meeting (Tucson, AZ, 7/2024); 3R+3C Meeting (Fukuoka Japan, 11/2024)

Seminars (partial listing: 2018–present): MIT Biology Colloquium, 1/9/18; UCLA Molecular Biology Institute, 2/1/18; Stowers Institute, 3/21/18; MD Anderson Cancer Center Smithville, 4/11/18; UT Austin Div. Pharmacology/Toxicology 4/12/18; Univ. Copenhagen 5/28/18; Rockefeller University Postdoc Retreat (Keynote), 9/6/18; Yale School of Medicine, 9/25/18; Columbia Irving Medical Center 1/23/19; Osaka University, 9/27/2019; Washington St Univ Center for Reproductive Biology Symposium (Keynote Speaker), 10/2019); Max Planck Institute of Biochemistry Distinguished Visitor Lecture Series (3/2/20); Institute for Research in Biomedicine, Belinzona Switzerland (3/4/20); ETH Zurich Switzerland (3/6/20 (canceled)); Max Planck Institute for Plant Breeding Research, Cologne Germany (4/2/20 (postponed)); Mt. Sinai Medical School (1/28/21, virtual); University of Kentucky 2/15/21, virtual); Lawrence Berkeley National Laboratory (2/16/21, virtual); Virginia Tech Dept of Biochemistry (3/1/21, virtual); Columbia Social DNAing seminar series (4/29/21, virtual); Seminars in Oncology Lecture Series, Dana-Farber Cancer Institute (6/24/21, virtual); University of Utah (11/1/21, virtual); Rockefeller Univ. Anderson Cancer Center lecture (11/4/21); Penn Center for Genome Integrity (4/4/22); Max Planck Institute for Plant Breeding Research, Köln (3/31/22; postponed); Max Planck Institute for Biophysical Chemistry, Göttingen (3/31/22); Univ. of Michigan (10/7/22); Barnum Museum Lecture, Tufts University (10/21/22); Paul Doty Lecture, Harvard University MCB Department (11/30/23)

Current Research Support

Howard Hughes Medical Institute, Investigator, 8/1/2008–10/31/2025

R35 GM118092 (Keeney, PI), 5/1/2016–4/30/2026, “Mechanism and regulation of meiotic recombination.”

R01 HD110120 (Keeney and Patel, mPI), 8/3/2022–4/30/2027, “Structural and functional principles underlying germline genome transmission.”

Publications

NCBI bibliography: https://www.ncbi.nlm.nih.gov/myncbi/scott.keeney.1/bibliography/public/

* Corresponding author(s), † Equal contribution

1. Nishida C, Choi SY, Kim J, **Keeney S**, and *Linn S. (1988) DNA polymerase δ plus HeLa or human fibroblast cell-free extracts complement permeabilized xeroderma pigmentosum fibroblasts: Application for purification of repair factors, in: E.C. Friedberg and P.C. Hanawalt (Eds.), *Mechanisms and Consequences of DNA Damage Processing*, Liss, New York, pp.337-341.
2. **Keeney S** and *Linn S. (1990) A critical review of permeabilized cell systems for studying mammalian DNA repair. *Mutat. Res.* **236**:239-252.
3. Juan JY, **Keeney SN**, and *Gregory EM. (1991) Reconstitution of the *Deinococcus radiodurans* aposuperoxide dismutase. *Arch. Biochem. Biophys*. **286**:257-263.
4. **Keeney S**, Wein H, and *Linn S. (1992) Biochemical heterogeneity in xeroderma pigmentosum complementation group E. *Mutat. Res.* **273**:49-56.
5. **Keeney S**., Chang GJ, and *Linn S. (1993) Characterization of a human DNA damage binding protein implicated in xeroderma pigmentosum E. *J. Biol. Chem*. **268**:21293-21300.
6. Reardon JT, Nichols AF, **Keeney S**, Smith CA, Taylor JS, Linn S, and *Sancar A. (1993) Comparative analysis of binding of human damaged DNA-binding protein (XP-E) and *Escherichia coli* damage recognition protein (UvrA) to the major ultraviolet photoproducts: T[*c,s*]T, T[*t,s*]T, T[6,4]T, and T[Dewar]T. *J. Biol. Chem.* **268**:21301-21308.
7. **Keeney S**, Eker APM, Vermeulen W, Brody T, Hoeijmakers, JHJ, Bootsma D, and *Linn S. (1994) Correction of the DNA repair defect in xeroderma pigmentosum E by injection of a DNA damage binding protein. *Proc. Natl. Acad. Sci. USA* **91**:4053-4056.
8. Dualan, R, Brody T, **Keeney S**, Nichols AF, Admon A, and *Linn S. (1995) Chromosomal localization and cDNA cloning of the genes (DDB1 and DDB2) for the p127 and p48 subunits of a human damage-specific DNA binding protein. *Genomics* **29**:62-69.
9. **Keeney S** and *Kleckner N. (1995) Covalent protein-DNA complexes at the 5′ strand termini of meiosis-specific double-strand breaks in yeast. *Proc. Natl. Acad. Sci. USA* **92**:11274-11278.
10. Vaisman A, **Keeney S**, Nichols AF, Linn S, and *Chaney SG. (1996) Cisplatin-induced alterations in the expression of the mRNAs for UV-damage recognition protein. *Oncol. Res.* **8**:7-12.
11. **Keeney S** and *Kleckner N. (1996) Communication between homologous chromosomes: genetic alterations at a nuclease-hypersensitive site can alter mitotic chromatin structure at that site both in *cis* and in *trans*. *Genes Cells* **1**:475-489.
12. **Keeney S**, Giroux CN, and *Kleckner N. (1997) Meiosis-specific DNA double-strand breaks are catalyzed by Spo11, a member of a widely conserved protein family. *Cell* **88**:375-384.
13. ***Keeney S**, Baudat F, Angeles M, Zhou Z-H, Copeland NG, Jenkins NA, Manova K, and *Jasin M. (1999) A mouse homolog of the *Saccharomyces cerevisiae* meiotic recombination DNA transesterase Spo11p. *Genomics* **61**, 170-182.
14. Cha RS, Weiner BM, **Keeney S**, Dekker J, and *Kleckner N (2000) Progression of meiotic DNA replication is modulated by interchromosomal interaction proteins, negatively by Spo11p and positively by Rec8p. *Genes Dev.* **14**, 493-503.
15. **Keeney S** (2000) Meiotic machinations (News and Views). *Nat. Genet.* **25**, 248.
16. Baudat F, Manova K, Yuen JP, *Jasin M, and ***Keeney S** (2000) Chromosome synapsis defects and sexually dimorphic meiotic progression in mice lacking Spo11. *Mol. Cell* **6**, 989-998.

17. Baudat F and ***Keeney S**. (2001) Meiotic recombination: Making and breaking go hand in hand. (Preview). *Curr. Biol.*, **11**: R45-R48.

18. Mahadevaiah SK, Turner JMA, Baudat F, Rogakou EP, de Boer P, Blanco-Rodriguez J, Jasin M, **Keeney S**, Bonner WM, and *Burgoyne PS (2001) Recombinational DNA double strand breaks in mice precede synapsis. *Nat. Genet.* **27**, 271-276.

19. **Keeney S** (2001) Mechanism and control of meiotic recombination initiation. *Curr. Top. Dev. Biol.* **52**, 1-53.

20. Klein U, Esposito G, Baudat F, ***Keeney S**, and *Jasin M. (2002) Mice deficient for the topoisomerase II-like DNA transesterase Spo11 show normal immunoglobulin somatic hypermutation and class switching. *Eur. J. Immunol.* **32**, 316-321.

21. Kee K and ***Keeney S**. (2002) Functional interactions between *SPO11* and *REC102* during initiation of meiotic recombination in *Saccharomyces cerevisiae*. *Genetics* **160**, 111-122.

22. Diaz RL, Alcid AD, Berger JM, and ***Keeney S**. (2002) Identification of residues in yeast Spo11p critical for meiotic DNA double-strand break formation. *Mol. Cell. Biol.* **22**, 1106-1115.

23. Martini E, **Keeney S**, and *Osley MA (2002) A role for histone H2B during UV-induced DNA repair in *Saccharomyces cerevisiae*. *Genetics* **160**, 1375-1387.

24. Martini E and ***Keeney S**. (2002) Sex and the single (double-strand) break. *Mol. Cell* **9**, 700-702

25. Arora C, Kee K, Maleki S, and ***Keeney S** (2004) Antiviral protein Ski8 is a direct partner of Spo11 in meiotic double-strand break formation, independent of its cytoplasmic role in RNA metabolism. *Mol. Cell* **13**, 549-559.

26. Henderson KA and ***Keeney S** (2004) Tying synaptonemal complex initiation to the formation and programmed repair of DNA double-strand breaks. *Proc. Natl. Acad. Sci. USA* **101**, 4519-4524.

27. Kee K, Protacio RU, Arora C, and ***Keeney S** (2004) Spatial organization and dynamics of the association of Rec102 and Rec104 with meiotic chromosomes. *EMBO J.* **23**, 1815-1824.

28. Kauppi L, Jeffreys AJ, and ***Keeney S** (2004) Where the crossovers are: Recombination distributions in mammals. *Nature Rev. Genet.* **5**, 413-424.

29. Maleki S and ***Keeney S** (2004) Modifying histones and initiating meiotic recombination: New answers to an old question. (Preview) *Cell* **118**, 404-406.

30. Di Giacomo M, Barchi M, Baudat F, Edelmann W, ***Keeney S**, and *Jasin M (2005) Distinct DNA damage-dependent and independent responses drive the loss of oocytes in recombination-defective mouse mutants. *Proc. Natl. Acad. Sci. USA* **102**, 737-742. PMC545532

31. Okada T and ***Keeney S** (2005) Homologous recombination: Needing to have my say. *Curr. Biol.***15**, R200-R202.

32. Ahn S-H, Henderson KA, **Keeney S**, and *Allis CD (2005) H2B (Ser10) phosphorylation is induced during apoptosis and meiosis in S. cerevisiae. *Cell Cycle* **4**, 780-783.

33. Barchi M, Mahadevaiah S, Di Giacomo M, Baudat F, de Rooij DG, Burgoyne PS, *Jasin M, and ***Keeney S** (2005). Surveillance of different recombination defects in mouse spermatocytes yields distinct responses despite elimination at an identical developmental stage. *Mol. Cell. Biol.* **25**, 7203-7215. PMC1190256

34. Neale MJ, Pan J, and ***Keeney S** (2005) Endonucleolytic processing of covalent protein-linked DNA double-strand breaks. *Nature* **436**, 1053-1057.

35. Henderson KA and ***Keeney S** (2005) Synaptonemal complex formation: Where does it start? *Bioessays* **27**, 995-998.

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